

LABORATORY SPRAY DRYER



Spray dryers are single stage convection heated continuous dryers, suitable for drying of liquids, slurries & pastes. Drying time being very low (of the order of few seconds), they are ideal for temperature-sensitive oxidation-prone products. They can be used from laboratory scale applications (few kg/hour) up to very large commercial scale applications (several tons/hour). They can handle very dilute feed having almost 100% moisture content, & yet can bring the moisture content in the dried product down to almost zero.

We offer a simple & effective laboratory scale spray dryer. It is suitable for use in academic institutions for demonstration & practicals. It is also suitable for use in research laboratories for the purpose of process development & scale-up.

The principle of operation is as follows: A variable speed pump delivers feed to a 2-fluid spray nozzle. Simultaneously, a compressor supplies compressed air to the nozzle. The combined action results in atomization of the liquid into a fine vapourized spray, which is injected into the drying chamber. A large volume of hot air is also blown into the chamber.

Instantaneous drying of the vapourized liquid takes place inside the chamber. The mixture of air & dried particles is separated in a cyclone separator, & the dried particles are then collected in a collection bottle.

The air compressor, air blower with pre-filter, & electric air heater are mounted inside a rust-free powder coated control panel. The stainless steel drying chamber & the pyrex glass cyclone are mounted in front of the panel for ease of operations. The temperature indicator, temperature controller, feed pump, LED indicators & switches are mounted on the front of the panel.

Salient features of our product are as follows :-

1. Designed to enable initial product trials & evaluation to be carried out quickly & efficiently.
2. Suitable for a wide range of applications where the production of a free-flowing powder is required.
3. Chemically resistant powder coated housing.
4. Blower, heater & controls for inlet temperature & pump speed.
5. Built-in air compressor.
6. Inlet air filter provided to ensure that the drying air does not include contaminants.
7. Quick connect clamps & fittings for quick assembly & removal of components.
8. 2-fluid spray nozzle in stainless steel with 0.5 mm jet ensures fine vapourized spray.



Manufactured in India by :-

NAVIN PROCESS SYSTEMS

6, Vaidehi Residency, MIT College Road, Rambaug Colony, Kothrud, Pune – 411 038, India
Tel./Fax : 91-20-25460214 E-mail: info@napro.co.in URL : <http://www.napro.co.in>